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Effect of ultrasonic waves on the stability of all-trans lutein and its degradation kinetics

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Abstract

Ultrasound treatment has been widely applied in the extraction of biologically active compounds including carotenoids. However, there are few reports on their effects on the stability of these compounds. In the present study, the stability of all-trans lutein, one of the carotenoids, was investigated under the action of ultrasound. Results showed that ultrasound induced the isomerization of all-trans lutein to its isomers, namely to 13-cis lutein, 13'-cis lutein, 9-cis lutein and 9'-cis lutein as analyzed by HPLC coupled with DAD and LC-MS; and the percentage of the isomerization increased with increasing both

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